

REMARKS

Claims 2-15 are pending in the application. Claim 4 has been amended. Claim 15 is newly presented. Reconsideration of this application is respectfully requested.

Claim 4 has been amended to conform to independent claims 11 and 14 so that "automatic expression" is used in each of these claims.

Applicant appreciates the Examiner participating in a telephonic interview on September 18, 2006. Prior to the interview, the Examiner was furnished with a Proposed Amendment for Interview of September 18, 2006, a copy of which is appended hereto as Exhibit A.

Also, a Declaration Under Rule 132 of James M. Schreder, hereinafter referred to as Schreder Declaration, is appended hereto as Exhibit B.

During the course of the interview, Applicant's attorney pointed out that U.S. Patent No. 5,881,115 to Lipner, hereafter Lipner, did not disclose a table view that comprises a plurality of outputs of a selected step of a sequential control module, wherein the outputs comprise a combination of at least one automatic expression and at least one interactive instruction as recited in independent claim 4. Applicant's attorney reiterated the arguments set forth in the Proposed Amendment for Interview. The Examiner without discussing the argument ended the interview by saying that the final rejection stands.

The final Office Action rejects claims 2-7 and 9-14 under 35 U.S.C. 102(b) as anticipated by Lipner. This rejection is traversed.

The control system of the present invention comprises an operator station 800 or 802 and a controller R-C200 or R-FIMS as shown in Fig. 8. The operator

station comprises an interface component that provides to an operator a display screen having a table view of a procedure of a computer controlled process that permits the operator to select a step of the procedure and to view the outputs of the selected step, wherein the outputs comprise a combination of interactive instruction and automatic expression. The ability to view all of the outputs of a step, whether manual or automatic, is a user friendly feature and very advantageous as it eliminates a need for the operator to switch among several views to achieve interactive control. This feature also allows the flexibility of combining automatic expression with manual instructions into a single procedure with a single table view for operator control and viewing of both the automatic expression and the interactive instructions. These instructions are executed by controller R-C200 or R-FIMS.

In contrast, Lipner discloses a control system having a distributed process control unit 5 and a Supervisory Sequential Controller Interface (SSCI) 15. SSCI 15 is designed to provide an interface, which allows for both user-paced (manual) and system-paced (automatic) procedure and sequence monitoring. Lipner's instructions are either automatic or manual, but not a combination of both. That is, Lipner's procedures are either automatic or manual, but not a combination of both. This results in two or more separate procedures to handle a task involving both automatic control and interactive control vis-a-vis the present invention's single procedure that uses a combination of automatic expression and interactive instructions. In addition, Lipner's instructions are executed by work station 19 and not by distributed control unit 5.

Lipner lacks elements recited in independent claim 4, executable instructions recited in independent claim 11 and steps recited in independent claim 14. Therefore, Lipner does not anticipate independent claims 1, 11 and 14.

Lipner lacks the following user interface component recital of independent claim 4:

“a user interface component that provides at least a table view, said table view comprising a plurality of outputs of a selected step of at least one of said sequential control modules, wherein said outputs comprise a combination of at least one automatic expression and at least one interactive instruction”.

Lipner's SSCI 15 provides to an operator an executive screen 39 (Fig. 2) comprising a list of procedures 41 to scroll through and to select one or more procedures to be started. Lipner's SSCI 15 also provides to the operator a procedure screen 47 (Fig. 3) of a current procedure. Procedure screen 47 includes mode selection buttons 51 for the operator to select a mode of a procedure. These modes are described (column 5, lines 7-10) shown in Fig. 3 as “manual”, “auto” and command advisor”. There is no button for a combination of both manual and auto and, therefore, no display view that comprises a combination of interactive instruction and automatic expression as claimed in independent claim 4. In fact, Lipner's steps of a procedure are stored with equations that permit their execution either automatically or manually based on the operator's selection of automatic or manual mode for the procedure. See column 2, lines 10-21 and 48-51, and column 5, lines 5-10. Lipner does not mention any mode that has a combination of automatic and manual instructions. Schreder Declaration, paragraphs 5 and 7.

Lipner's Figs. 2 and 3 show only procedures that are in manual mode. Lipner has no drawing figure that shows or description that describes the detail of a procedure in an automatic mode.

The Examiner contends that a table view comprising a combination of interactive instruction and automatic expression is disclosed in Lipner (paragraphs 8, 23 and 27 of the final Office Action and comment of the Advisory Action). In support of the contention, the Examiner cites Fig. 3, column 2, lines

27-35, and column 4, lines 19-22 and 55-63. The columns 2 and 4 passages are similar in content. The column 4, lines 19-22, passage reads as follows:

“In the ‘automatic’ mode, the SSCI will advance to the next step if the pertinent conditions are verified. If the conditions are violated, however, the procedure will transfer to a ‘violated’ mode which requires operator action”.

Lipner has no other description or a figure that shows a table view of a “violated” mode. Schreder Declaration, paragraph 8.

Thus, Lipner leaves a reader with supposition as to how the system will handle a “violated” mode and what will be displayed in what display screen to the operator. Based on the description of selection buttons 51 and the relational database format of the sequential steps at column 2, lines 19-21, the transfer to a “violated” mode might involve a warning message with a prompt to change the mode from automatic to manual, which would provide a screen with manual instructions to handle the violation. Schreder Declaration, paragraph 8. Because of the lack of clarity of the violated mode, it cannot be maintained that Lipner’s violated mode transfer anticipates the interface component recited in independent claim 4.

The Lipner, column 4, line 64 to column 5, line 2, passage reads as follows:

“Procedure interface 47 screens of multiple procedures may be displayed simultaneously, such as where several procedures are being executed at the same time. The multiple procedures may each be displayed in a smaller window, or any one or more may be iconized, to be displayed at the operator’s request”.

This passage teaches a simultaneous display in separate windows of multiple procedures that are being executed at the same time. Thus, each window will have a separate procedure that is in either a manual mode or an automatic mode per the operator's selection of mode buttons 51. None of the displayed procedures would have a table view of the "outputs of a selected step of at least one of the sequential control modules" in which the "outputs comprise a combination of at least one automatic expression and at least one interactive instruction" as recited in independent claim 4. Schreder Declaration, paragraph 10.

Therefore, for the reasons set forth above, Lipner does not disclose and lacks the user interface component of independent claim 4.

Lipner also does not disclose the controller recited in independent claim 4 as follows:

"at least one controller that is operated by executing said interactive instruction at least partly in response to said operator input and said automatic expression automatically".

"Lipner's program 32 in work station 19 of SSCI 15 executes the instructions of the steps shown on the display screen 47 and provides control signals as a result of the execution that are provided to distributed control processor 5 to control the process". Schreder Declaration, paragraph 9. In contrast, independent claim 4 recites a controller that executes "said interactive instruction at least partly in response to said operator input and said automatic expression automatically".

For the reason set forth above, Lipner lacks the controller recited in independent claim 4.

Lipner lacks the presenting step of claim 14 and the instruction of independent claim 11 that causes an interactive display as each recites a display screen that displays a plurality of outputs of a selected step of at least one of the sequential control modules in which each output comprises a combination of both automatic expression and interactive instruction. The arguments set forth above regarding Lipner's lack of the user interface component of independent claim 4 are applicable.

Lipner also lacks the using step of independent claim 14 and the instruction of claim 11 that causes a controller as each recites that the controller executes the automatic expression. The arguments set forth above regarding Lipner's lack of the controller of independent claim 4 are applicable.

Lipner further lacks the determining step of independent claim 14 and the instruction of independent claim 11 that causes a determination. The determining step or determination instruction determines whether a current one of the outputs is an interactive instruction or an automatic expression. Lipner does not display a selected step that has a plurality of outputs that comprise a combination of an automatic expression and an interactive instruction. Lipner's displayed procedure is in either automatic mode or manual mode. Thus, there is no need to make such a determination since the procedure.

The Examiner contends that when a "violated" mode transfer occurs, Lipner determines that an interactive instruction will occur. The Examiner cites no support in Lipner for this contention. As noted above, Lipner merely mentions the transfer to "violated" mode without describing the transfer and any resulting display screens. Because of the lack of clarity of the violated mode, it cannot be maintained that Lipner's violated mode transfer as described in the column 2 and column 4 passages anticipates the determining step or the determination instruction recited in independent claim 14 and 11.

Further with respect to independent claims 11 and 14, since Lipner lacks the “determination” instruction and the “determining” step, Lipner also lacks the “if said current output” instruction and step, which are conditional on the determination made by the “determining” instruction or step. Therefore, Lipner also lacks the “if said current output” instruction and step recited in independent claims 11 and 14.

For the reason set forth above, it is submitted that the rejection of claims 2-14 under 35 U.S.C. 102(b) as anticipated by Lipner is erroneous and should be withdrawn.

The Office Action rejects claim 8 under 35 U.S.C 103(a) as unpatentable over Lipner in view of U.S Patent No. 6,775,576 to Spriggs, hereafter Spriggs.

This rejection is erroneous claim 8 depends on independent claim 4 via intervening claim 6. That is, Lipner lacks elements recited in independent claim 4 as set forth in the discussion of claim 4. These elements are not disclosed or taught by Spriggs, which was cited for a different reason.

For the reasons set forth above, it is submitted that the rejection of claim 8 under 35 U.S.C. 103(a) is erroneous and should be withdrawn.

Newly presented claim 15 recites an operator station that comprises a user interface component that provides a display to an operator and a program running thereon an interactive procedure to present on the display a table view comprising a plurality of outputs of an operator selected step of at least one of said sequential control modules, wherein the outputs comprise a combination of at least one automatic expression and at least one interactive instruction. New claim 15 further recites a controller that executes the automatic expression automatically and the interactive instruction at least partly in response to one or more inputs of the operator to the operator station. These recitals are similar to

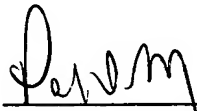
those contained in claim 4. Accordingly, it is submitted that new claim 15 distinguishes from the cited art for the same reasons set forth above for claim 4, and is, therefore, allowable.

It is respectfully requested for the reasons set forth above that the rejections under 35 U.S.C. 102(b) and 35 U.S.C. 103(a) be withdrawn, that claims 2-15 be allowed and that this application be passed to issue.

Respectfully Submitted,

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Paul D. Greeley
Reg. No. 31,019
Attorney for Applicant
Ohlandt, Greeley, Ruggiero & Perle, L.L.P.
One Landmark Square, 10th Floor
Stamford, CT 06901-2682
(203) 327-4500